Landscapes for People Food and Nature

Financing Strategies for Integrated Landscape Investment

Synthesis Report

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Landscapes for People, Food and Nature
An International Initiative for Dialogue, Learning and Action

The Landscapes for People, Food and Nature Initiative is a collaborative initiative to foster cross-sectoral dialogue, learning and action. The partners aim to understand and support integrated agricultural landscape approaches to simultaneously meet goals for food production, ecosystem health and human wellbeing.

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Foreword

Policymakers and land managers around the world are struggling to use our finite land and resource base to increase agricultural production, ensure resilient ecosystems and improve livelihoods. Many are turning to integrated landscape management (ILM) as a framework for inter-sectoral planning and investments to reduce potential trade-offs and realize inherent synergies. ILM approaches are being applied to reduce deforestation in agricultural landscapes, increase agricultural production and water supplies by restoring degraded watersheds, and to establish biological corridors through densely populated rural regions.

Many national and international agencies have begun investing in and adopting ILM approaches, as have a growing group of pioneering private investment funds. This is encouraging, as the strained state of many public sector budgets after successive financial crises has heightened the need for a blend of both public and private finance to achieve objectives of sustainable agriculture, ecosystems and livelihoods at scale.

But while the potential rewards are increasingly clear, it is no easy task to balance the conflicting financial, environmental and social return profiles required by the different investors who are critical for landscape management. When the Landscapes for People, Food and Nature Initiative began in late 2011, it was apparent that successful ILM required access to the right kind of finance; and also that there was considerable innovation emerging in both public and private finance to address the new opportunities of ILM. However this emerging experience had not yet been assessed. "Financing Strategies for Integrated Landscape Investment," developed collaboratively by the expert members of the finance working group of the LPFN, is a timely input to the vibrant dialogues about investment strategies to achieve an inclusive green economy that is resilient to climate change.

This study uncovered a wealth of models for financing ILM, and for promoting integrated investments in agriculture, ecosystems and rural development. The report provides a foundation for building robust investment platforms, including more effective private-public partnerships. The cases from innovative finance institutions, as well as the case studies of landscapes from Brazil, Kenya and South Africa, demonstrate promising ways to add value and attract investment that benefits people, food and nature.

On behalf of the many partners of the Landscapes for People, Food and Nature Initiative, I urge private financial leaders, multilateral banks and finance ministries to consider the key findings and messages in this report and integrate them into their own operating models.

"This study uncovered a wealth of models for financing ILM, and for promoting integrated investments in agriculture, ecosystems and rural development."

Sara J Scherr
April 23, 2014

President, EcoAgriculture Partners and Secretariat Coordinator of the Landscapes for People, Food and Nature Initiative

Saplings at the World Agroforestry Centre in Kenya. Photo by Krista Heiner/EcoAgriculture Partners.

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Acronyms

Acronym	Definition
ACF	Althelia Climate Fund
BEM	Bunge Environmental Markets
BioCF	World Bank BioCarbon Fund
BNDES	Brazilian National Development Bank
CEPF	Critical Ecosystem Partnership Fund
CSR	Corporate social responsibility
DFI	Development finance institution
GEF	Global Environment Facility
GCF	Green Climate Fund
IFAD	International Fund for Agricultural Development
ILI	Integrated landscape initiative
ILM	Integrated landscape management
ISFL	Initiative for Sustainable Forest Landscape
LPFN	Landscapes for People Food and Nature Initiative
LULUCF	Land use, land-use change and forestry
NGO	Non-governmental organization
NICFI	Norway's International Climate and Forest Initiative
NORAD	Norwegian Agency for Development Cooperation
PACT	Atlantic Forest Restoration PACT, Brazil
PES	Payment for ecosystem services
RSPO	Roundtable for Sustainable Palm Oil
RTRS	Roundtable for Responsible Soy
SAGCOT	Southern Agricultural Growth Corridor of Tanzania
SANBI	South African National Biodiversity Institute
SKEP	Succulent Karoo Ecosystem Programme
SLM	Sustainable land management
SWF	Sovereign wealth fund
SFM	Sustainable forest management
TIAA-CREF	Teachers Insurance and Annuity Association – College Retirement Equities Fund
USAID	United States Agency for International Development
UNESCO	United Nations Educational, Scientific and Cultural Organizaiton
WWF	World Wildlife Fund

Executive Summary

The financing challenge of integrated landscape management

Land managers from small-scale farmers to large agri-businesses are increasingly challenged by the inter-related impacts of ecosystem degradation, climate change, competition for scarce resources, poverty and food insecurity. In many cases, these risks cannot be mitigated solely through on-farm management or supply chain programs, the current focus of most efforts, and must be dealt with at the landscape scale. The public and civic sectors have difficulty promoting landscape-scale action as they tend to operate in sectoral silos and undertake parallel planning processes at national, subnational and local scales for agricultural production, watershed management, forestry, biodiversity, bio-energy, climate adaptation, climate mitigation and community development. Integrated Landscape Management (ILM) provides a context to spatially target and harmonize investments so that they can efficiently yield public goods and private financial returns while mitigating investment risks.

To scale up financing for ILM, the full spectrum of private and public financial institutions will need to adapt and develop innovative mechanisms that can move beyond sector-based approaches. Each institution will have to figure out how best to engage given its objectives and capabilities, and some of them are already beginning to operate in this space. Meanwhile, stakeholders of ILM processes throughout the world are figuring out how to exploit the opportunities that are already available to finance their investments.

Objective of the study

The purpose of this study is to take stock of the experiences of financial institutions and landscape actors, provide guidance to financial institutions and policymakers on how they can contribute to and benefit from improved financial opportunities for ILM, and to identify strategies for landscape stakeholders to more effectively access finance for their integrated activities. The paper describes the financing needs of Integrated Landscapes Initiatives (ILIs), reviews the finance gaps and challenges for asset and enabling investment in ILM, and provides recommendations for how financial institutions, policymakers and leaders of ILIs can benefit from integrated landscape investments and work together to overcome ILM finance gaps.

Methodology

The paper's findings are based on a review of roughly 250 financial institutions and mechanisms that support multi-objective investments within a landscape context as well as 29 integrated landscape initiatives. Full case studies were developed for the Althelia Climate Fund (ACF), Bunge Environmental Markets (BEM), EcoEnterprises Fund, Global Environment Facility (GEF), Moringa Fund, Norway's International Climate and Forest Initiative (NICFI), and World Bank BioCarbon Fund's Initiative for Sustainable Forest Landscapes (ISFL), along with an integrated case on agricultural finance which includes Brazilian Central Bank Resolutions for Rural Credit, Rabobank, TIAA-CREF, Agro-Ecological Investment Management, Nestlé's Rural Development Framework, International Fund for Agricultural Development (IFAD) and United States Agency for International Development (USAID). Shorter cases were written for the Livelihoods Fund and Global Mechanism. The ILI cases include Imarisha Naivasha, Lake Naivasha, Kenya; PACT, Atlantic Forest, Brazil; and the Succulent Karoo Ecosystem Programme, Namaqualand, South Africa. The institutions and mechanisms analysis covered financing sources, intermediaries, instruments, and investment objectives, as well as the revenue streams that returned back to the investor. The ILI studies focused on the sources and structures of financial flows to particular landscape activities, the financial gaps and barriers for landscape actors, the opportunities for innovation in financing and mechanisms based on ILI needs, and the role played by sub-national and national government actors.

Types of landscape investments

ILIs can develop through different entry points, and the types of finance that landscape actors can access may change depending on the stakeholders involved. Types of ILIs include government-led or multi-lateral-led initiatives; regional initiatives or platforms; traditional, local or community-led initiatives; NGO, grassroots or civil society-led initiatives; and private sector-led initiatives.

Successful ILM requires the appropriate blending of asset and enabling investment, plus financial institutions with the experience to recognize the opportunities in both spheres. Asset investments create tangible value that is returned back to the investor or land manager, ideally with a profit. Categories of asset investment for ILM include agricultural production practices that contribute to multiple landscape objectives, farm conservation or production, restoration or protection of natural assets on public or private lands, environmentally and socially responsible enterprise, and large-scale green infrastructure. Enabling investments lay the institutional and policy foundation for asset investments by generating incentives to invest in a particular activity, usually with no immediate expectation of financial rewards. For ILM these are investments in stakeholder engagement and cooperation, appropriate legal and regulatory framework, knowledge and capacity to plan and manage on a landscape scale, and the development of incentive mechanisms.

Sources of finance

ILM finance is provided by the full range of public and private financial actors, from a private investor's motivation for purely financial returns to a government's or NGO's objective to provide public goods. In between these two ends of the spectrum are actors with multiple priorities, including social and environmental impact investors and development finance institutions (DFIs). These investors targeting multiple priorities recognize that their short-term financial returns may be lower than what would be expected by a purely private investor, yet they still expect a financial return alongside their other objectives. ILIs are almost always public-private partnerships (PPPs) of some sort, and they are financed by diverse actors and mechanisms that require the participation of both public and private funding sources to overcome a range of barriers related not only to capital constraints, but also coordination, policy, technology and information. These partnerships bring together various combinations of private companies, governments, NGOs and development organizations. In addition to diversity in the types of investments that various actors finance, the mix of actors changes over time.

Constraints for mobilizing finance

Major constraints to mobilizing finance for ILM asset investments include short time horizons required for returns by most investors, a mismatch between investment stake and size of investment opportunities, and high investment risk versus return potential. As a result of these factors acting together, even though investors are increasingly interested in financing ILM activities, substantial asset investment financing gaps remain. Challenges for ILM enabling investments include the silos of public sector institutions, the underfunding of landscape initiative establishment and coordination, and the difficulty of appropriately targeting enabling investments to promote asset investments.

Recommendations

To overcome challenges of insufficient and ineffective enabling investment, as well as the mismatch between current sources of finance for asset investments and finance needs within some integrated landscape initiatives, we propose the following recommendations:

Strengthen enabling investments

- Clarify, quantify and communicate the ILM business case. Financial decision-makers need more rigorous tools to identify the investment risks within a landscape context and which integrated landscape investments represent viable business models.

- Mobilize public and civil society sector finance for enabling landscape investments. The establishment of enabling conditions is critical to lay the foundation for future asset investments.
- Coordinate sectoral investments at the landscape scale to achieve inclusive green growth. Momentum for integrated planning has increased over the past few years as green growth strategies have emerged. Investments in ILM can serve as building blocks for these efforts.
- Foster new partnerships between financial institutions and landscape stakeholders. These partnerships must be based on an understanding of mutual benefit and trust.

Develop financial mechanisms to attract private sector asset investors to ILM

- Utilize public finance to reduce private sector risk. Public finance can be used to attract private investment in ILM through risk guarantees, seed capital and catalytic funding. These instruments can provide the means and incentives for landscape actors to convene and begin to apply standards and guidelines for investment.
- Use REDD+ and other targeted financial flows for enabling investments that catalyze asset investments. ILM can be a framework in which REDD+ or other targeted funds can be used to move beyond offsetting and support the development of long-term sustainable economic activities.
- Structure financial mechanisms to bridge asset investments across landscapes. Increasing the amount of asset investment in ILM will require the development of innovative financial mechanisms targeted to conducive time horizons, scales and risk profiles. Finance flowing from these mechanisms will not only need to be attracted to landscapes, but coordinated spatially across landscapes.
- Employ investment standards and guidelines to incentivize ILM investments. Standards and guidelines can be important tools to help investors evaluate risks. They also provide the public and civic sectors assurances that social and environmental impact will be minimized. However, very few, if any, contain criteria that would be relevant to a landscape scale analysis.

Introduction

Agricultural production, ecosystem services and livelihoods are inextricably linked. The role of healthy ecosystems in supporting and sustaining agricultural productivity is widely recognized (Jordan, Boody, Broussard et al. 2007; UNEP 2012), while societal demand for other ecosystem services is growing (Tscharntke, Clough, Wanger et al. 2012). Given the geographic dominance of crop and livestock production in global land use, farmlands must clearly play a central role in providing them (Wood, Sebastian and Scherr 2000). Land management will play a central role in adaptation and mitigation of climate change (FAO 2013; Scherr and Sthapit 2009).

These integrated challenges require integrated solutions that operate at appropriate scales. Landscape management strategies have been emerging over the past few decades throughout the world, but applied primarily to forestry, watershed and biodiversity management. However, with the growing footprint of agriculture, a pressing challenge of landscape management is now to link agriculture with the other inter-related needs from the landscape including provision of ecosystem services, protection of biodiversity, local livelihoods, and human health and well-being.

A framework for addressing these interconnected objectives at a landscape scale is referred to as integrated landscape management (ILM). ILM describes long-term collaboration among different groups of land managers and stakeholders to achieve the multiple objectives required from the landscape. Stakeholders seek to solve shared problems or capitalize on new opportunities that reduce trade-offs and strengthen synergies among landscape objectives. There are many different approaches to ILM, with varied entry points, processes and institutional arrangements, but most share features of broad stakeholder participation, negotiation around objectives and strategies,

Box 1. The key elements of integrated landscape management (ILM) (Scherr et al. 2013)

Shared or agreed management objectives encompass multiple benefits (the full range of goods and services needed) from the landscape.

Field, farm and forest practices are designed to contribute to multiple objectives including human well-being, food and fiber production, climate change mitigation, and conservation of biodiversity and ecosystem services.

Ecological, social, and economic interactions among different parts of the landscape are managed to realize positive synergies among interests and actors or to mitigate negative trade-offs.

Collaborative, community-engaged processes for dialogue, planning, negotiating and monitoring decisions are in place.

Markets and public policies are shaped to achieve the diverse set of landscape objectives and institutional requirements.

and adaptive management based on shared learning (Scherr, Shames and Friedman 2013). ILM can serve as a building block for 'Green Economy' development in land-use sectors (UNEP 2014). See Box 1 for a summary of the key elements of ILM.

In circumstances in which there are strongly competing land uses and stakeholder groups within a landscape, ILM provides a context to target and coordinate investments so that they can efficiently yield public and private returns and mitigate risks. Private sector actors, from small-scale farmers to large agribusinesses, are increasingly at risk from the ecological and social impacts of ecosystem degradation, climate change, competition for scarce resources, poverty and food insecurity. Agricultural productivity and ecosystems will be threatened by these risks that, in many cases, cannot be mitigated solely through on-farm management or supply chain programs and must be dealt with at the landscape scale.

Under business-as-usual, investment decisions are typically informed by standard financial models, which treat environmental and social factors as externalities that are irrelevant to the financial analysis. Historically, most private sector decision-makers considered such factors only when they were compelled to by public policies and regulations. In recent years, international investors and financial institutions have increasingly signed onto new sets of guidelines for good conduct, such as the Equator Principles, which set minimum standards for the social and environmental impact of investment. But the calculus for private investment is now changing more significantly, as investors and companies come to recognize that environmental and social factors constitute key risks and opportunities for the profitability and long-term viability of their business models. For instance, water-efficient agriculture can help companies improve the reliability of agricultural raw material supplies, and reduce the risk that climate change or drought will result in shortages. Precision application of water and agrochemicals can reduce input costs and increase profit. Engagement of rural commu-

Box 2. What is a landscape?

A 'landscape' is a socio-ecological system that consists of a mosaic of natural and/or human-modified ecosystems, with a characteristic configuration of topography, vegetation, land use, and settlements that is influenced by the ecological, historical, economic and cultural processes and activities of the area.

The mix of land cover and use types (landscape composition) usually includes agricultural lands, native vegetation, and human dwellings, villages and/or urban areas. The spatial arrangement of different land uses and cover types (landscape structure) and the norms and modalities of its governance contribute to the character of a landscape. Depending on the management objectives of the stakeholders, landscape boundaries may be discrete or fuzzy, and may correspond to watershed boundaries, distinct land features, and/or jurisdictional boundaries, or they may cross-cut such demarcations. Because of this broad range of factors a landscape may encompass areas from hundreds to tens of thousands of square kilometers (Scherr et al. 2013).

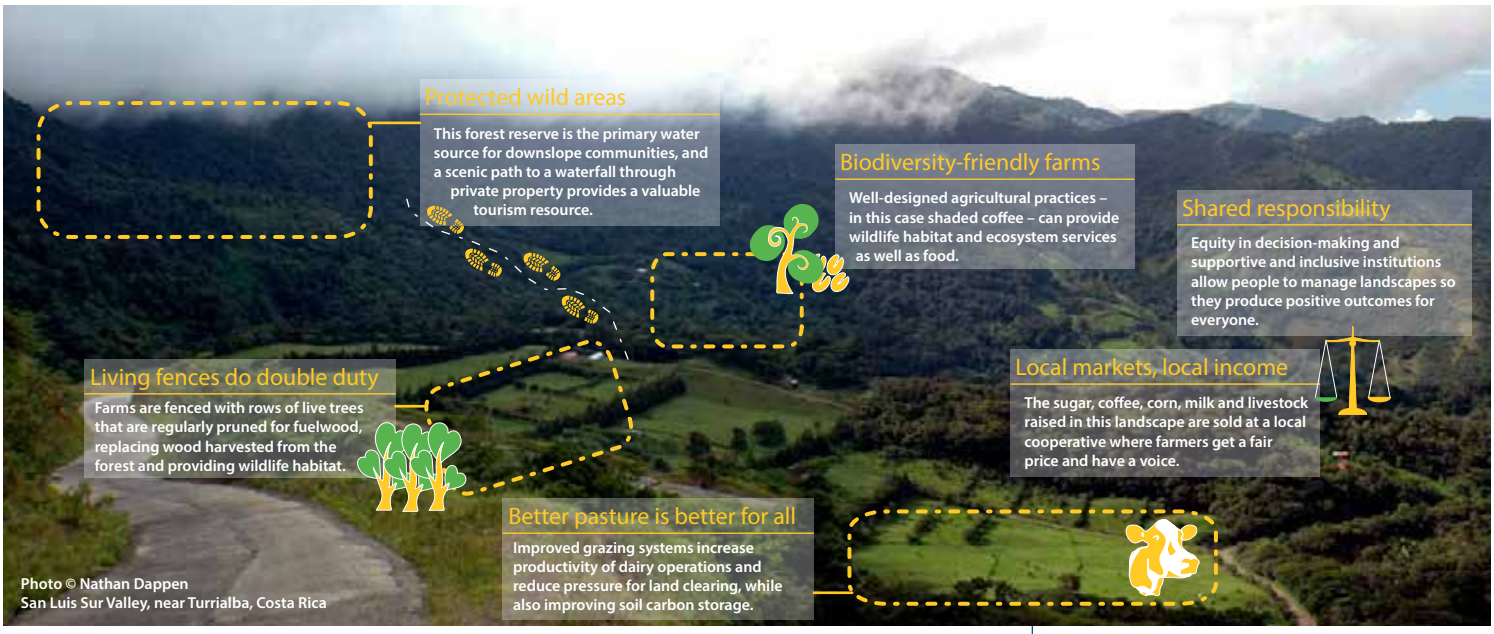

Figure 1. *Common elements of integrated landscape management*

nities in cooperative food-growing, processing and marketing ventures can reduce the risk of local conflict around a commercial farm. And improved social and environmental performance of the agricultural supply chain can translate into product differentiation and marketing advantages that can boost market share or price at the wholesale and consumer level. ILM can provide a framework for investors to address operational risks, particularly those in key sourcing areas; manage their reliance on ecosystem services, participate in voluntary standard programs and enhance their reputations (Kissinger et al. 2013). Furthermore, by collaborating with other stakeholders within a landscape, farmers and businesses may identify opportunities to share costs for investments to reduce their financial risk and increase productivity.

For the public and civic sectors, an ILM approach supports efficiencies in policy and institutional integration as well as returns to ecosystem service investments. Governments tend to operate in sectoral silos, and parallel planning processes may be undertaken at national, subnational and local scales for agricultural production, watershed management, forestry, biodiversity, bio-energy, climate adaptation, climate mitigation and community development. NGOs often invest their resources in parallel patterns. Even when the activities required to support these closely related objectives are similar, the separate processes may not be fully synchronized or, worse yet, work at cross purposes. ILM can provide the context for intersectoral planning and implementation and ground investment in the needs and realities of local stakeholders. A landscape

approach can also help to clarify the appropriate scale for investments in ecosystems, improving efficiency. For example, a program of interventions designed to increase water availability needs to be targeted at the most hydrologically relevant areas within the watershed.

Despite the development of landscape approaches, and growing recognition of their importance, investment remains sectorally siloed and spatially uncoordinated, while financing for integrated landscape activities is difficult to access. Agricultural finance institutions still focus on field, farm and supply chain levels while conservation and climate change funds largely focuses on single objectives such as water, biodiversity, climate change mitigation or adaptation. To scale up financing for ILM, the full spectrum of private and public financial institutions will need to adapt and develop innovative mechanisms that can move beyond sector-based approaches. Each institution will have to figure out how best to engage given its objectives and capabilities, and some of them are already beginning to operate in this space. Meanwhile, stakeholders of ILM processes throughout the world are figuring out how to exploit the opportunities that are already available to finance their investments.

Overview of Paper and Methodology

The finance working group of the Landscapes for People, Food and Nature Initiative (LPFN) undertook this study in order to provide guidance to financial institutions and policymakers on how they can contribute to and benefit from improved financing opportunities for ILM, and to identify strategies for landscape stakeholders to more effectively access finance for their integrated activities.

This study consisted of three components. First, we reviewed the formal and grey literature, guided by input from working group members and other key informants, to help clarify key questions addressed in the study.

Second, we analyzed financial institutions and mechanisms designed to support various components of ILM. To do this, we conducted an initial global scoping of institutions and mechanisms, through both a desktop review and interviews with key experts, including a broad range of financial institutions (public and private donors, asset owners, public sector and commercial banks, impact investors, portfolio funds, agribusinesses, charities and NGOs) that provide either funding (i.e. grants, concessional loans, technical capacity building, policy incentives, tax credits, and guarantees) or financing for investment (i.e. venture capital, private equity, loans, and micro-fi-

nance). This review identified over 250 financial institutions and mechanisms that support multi-objective investments within a landscape context. Furthermore, expert interviews provided a range of perspectives on ILM finance challenges and opportunities.Drawing on the initial scoping and discussion of major challenges and opportunities, 15 financial institution and mechanism case studies were developed, reflecting the broad range of mechanisms and motivations of public and private actors for investment in all components of ILM. Summaries of these case studies are included in Table 1.

Third, we reviewed a set of individual ILIs to assess how they access finance and how integrated outcomes are achieved with disparate sources of funds. The first step in this process was a broad scoping exercise in which 29 ILIs were identified as potential case studies, representing a diversity of entry points (including biodiversity or conservation; production in sectors such as agriculture, forestry and water; and economic development or social and livelihood needs) as well as institutional and agroecological context.[1] From these, three ILIs were selected for in-depth case studies, based on their diversity of entry point and institutional composition. (See the next section for the presentation of the ILI typology which was the basis for the case study selection.) The case studies analyzed the sources and structures of financial flows to landscape activities; the financial gaps and barriers for landscape actors; the opportunities for innovation in financial institutions and mechanisms based on ILI needs; and, the role played by sub-national and national government actors. These cases were Imarisha Naivasha, Lake Naivasha, Kenya; PACT, Atlantic Forest, Brazil; and the Succulent Karoo Ecosystem Programme, Namaqualand, South Africa. Summaries of these case studies are included below as boxes 3, 4, and 5.

This paper is a consolidation of the findings from all three components of this study and draws from the finance institutions and mechanisms and the ILI specific reports. The next section describes the financing needs of ILIs. This is followed by a review of the finance gaps and challenges for asset investments and enabling investments in ILM. Finally, recommendations are offered for how financial institutions, policymakers and leaders of ILIs can benefit from integrated landscape investments and work together to overcome ILM finance gaps.

1. The initial scoping of ILIs drew from LPFN continental reviews, focal landscapes, initiatives identified through the Reducing risk: landscape approaches to sustainable sourcing synthesis report (Kissinger et al 2013), literature surveys and expert interviews. The LPFN continental reviews included the Latin American review of 104 ILI initiatives in 21 countries and the African review including 87 ILIs in 33 countries. For full methodology and list of the 27 ILIs from the initial scoping, plus the full case studies and review of ILI analysis, visit landscapes.ecoagriculture.org/global_review/financingstrategies.

Finance Mechanism / Institution	Investment Available (USD)	Description	ILM Entry Points
Enabling Investment Category institutions			
Nestle	-	Rural Development Framework is a monitoring tool to quantify the impacts of Nestlé's sustainable sourcing and social impact programs at the landscape level.	Sustainable & climate resilient agriculture, sustainable water resources management, supply chain security, livelihoods.
World Bank BioCarbon Fund ISFL	280,000,000	Public-private sector initiative (carbon fund) to develop integrated landscape-level programs for emission reductions generated from the LULUCF sector.	Emissions reductions, REDD+, climate smart agriculture, sustainable livelihoods.
Global Environment Facility	2.096,000,000	Public financing fund with a mandate to serve as the financial mechanism of several major environmental conventions.	Multi-focal programs to address synergies and trade-offs between land use, climate and conservation issues at the landscape or jurisdictional levels.
Global Mechanism	-	Financial advisory to support developing countries prioritize SLM and access finance from public and private sources for SLM.	Sustainable land management, climate mitigation, adaptation.
Norad & NICFI	480,000,000 (109,000,000 CSO)	Development aid providing grants for clean energy, environmental protection and REDD programming and research in developing countries.	REDD+, climate adaptation, clean energy.
Asset Investment Category institutions			
Althelia Climate Fund	90,000,000 (first close)	Closed end fund developing multiple revenue streams from forest protection and sustainable land use in Africa, LatAm and Asia. PPP approach through a private equity investment vehicle.	Sustainable land use, adaptation, sustainable livelihoods, REDD+.
Moringa	70,000,000 (first close)	Closed end fund making direct equity and quasi-equity investments in Portfolio Companies in Africa and LatAm. PPP approach through a private equity investment vehicle.	Sustainable agro-forestry, adaptation, sustainable livelihoods, carbon, REDD+.
EcoEnterprises Fund	35,000,000 (EcoE II)	Provides venture capital to small-scale and community-based companies (organic agriculture, non-timber forest products, sustainable forestry, or ecotourism) in LatAm. PPP approach through venture capital/private equity vehicle.	Sustainable livelihoods, mitigation, adaptation, conservation.
Global Mechanism	-	Financial advisory to support developing countries prioritize SLM and access finance from public and private sources for SLM.	Sustainable land management, climate mitigation, adaptation.

Finance Mechanism / Institution	Investment Available (USD)	Description	ILM Entry Points
Agro-Ecological Fund	-	Fund to invest in ecological farmland and agriculture delivering financial benefits from improved profitability by reduced input costs and enhanced resilience.	Ecological organic farm management across a portfolio of farms.
Bunge Environmental Markets	1600 (AUM)	Major asset manager of emission reduction projects in established and emerging markets. PPP approach.	Emissions reductions projects, sustainable land use, supply chain development & adaptation, sustainable livelihoods.
TIAA-CREF Global Agriculture	2500	The institutional investor's investment fund makes direct investments in land used for agricultural production.	Sustainable agriculture (integrating environmental stewardship into investment approach).
Livelihoods fund	36	Investment fund providing investors with returns in the form of high quality carbon offsets. PPP approach.	Agroforestry, rural energy, livelihoods, large scale ecosystem restoration.
USAID (multiple components)	-	Development Credit Authority (DCA) supports lending to underserved credit worthy borrowers. Feed the Future initiative supports sustainable and inclusive agricultural growth.	Food security, livelihoods, climate-smart, sustainable agriculture.
Rabobank (multiple components)	-	Through various initiatives, funds and partnerships, it finances rural development and sustainable agriculture along the value chain.	Sustainability of food supply, inclusive food strategies, rural cooperatives.
Brazilian Central Bank Resolutions	-	Conditions the concession of rural credit in the Amazon Biome upon proof of compliance with legal and environmental regulations.	Sustainable agriculture, forest conservation.

Table 1. *Overview of financial institution case studies, with investment size where available, a brief description and the range of ILM entry points addressed by the institution or mechanism.*

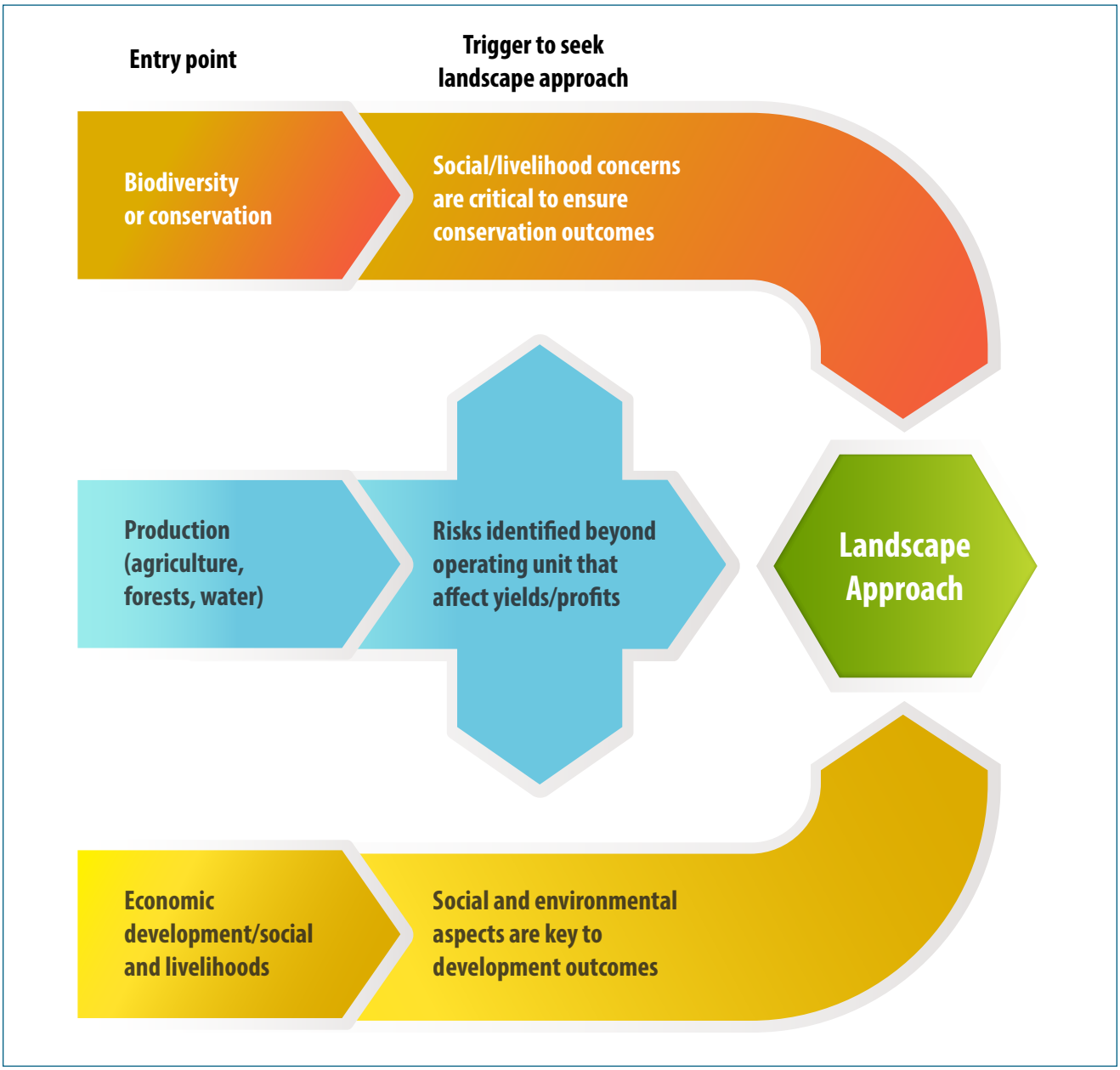

Figure 2. *Investment entry point and triggers for adopting on integrated landscape approach*

Finance needs

» *Integrated landscape initiatives access finance differently depending on the entry point of the initiative and the actors involved.*

» *ILM requires a mix of asset investments and enabling investments.*

Varieties of Integrated Landscape Initiatives

Integrated landscape activities are triggered through a multiplicity of needs and are initiated and led by all types of institutions. Therefore, the financing needs and sources in each case will be different. The initial motivations for integrated landscape action can be roughly organized into three entry points— production, conservation, and livelihoods.[2] The conservation entry point is usually represented by a government or civic sector agency with a focus on ecosystem conservation, water, or climate change. The livelihoods entry point is very broad, and, in this context, encompasses economic development as well as other social and livelihood priorities (i.e. employment, poverty reduction, access to healthcare, and rural electrification). The production entry point refers to single-sector approaches to resource use in which private or public actors identify operational or reputational risks that can only be mitigated by reaching beyond a single production unit. The trigger for stakeholders to collaborate in a landscape often comes when actors within one entry point begin to recognize their dependence on the others. Figure 2 illustrates how these entry points and triggers come together to motivate ILIs.

The formation of ILIs are usually driven by a dominant actor, and the characteristics of this actor often dictate which sources of finance an initiative will be aware of and able to access. Based on the initial review of ILIs, a typology was developed as a tool to aid in understanding the variety of ILI governance and leadership characteristics, which appear to have implications for how various ILI activities are financed. The reviewed initiatives were organized into five types: government-led or multi-lateral-led initiatives; regional initiatives or platforms; traditional, local or community-led initiatives; NGO or civil society-led initiatives; and private sector-led initiatives. The typology described below is illustrative of general patterns, and a given ILI may shift between types depending on its stage of development. For instance, community-based initiatives may formalize governance through the creation of an NGO, and may even eventually be housed in a government ministry. The sources, diversity and quantity of finance

2. The framework of entry points is based on the Latin America and Africa LPFN continental reviews (citations), which defined four domains of landscape multi-functionality—agriculture, conservation, livelihoods, and institutional planning and coordination.

Box 3. PACT, Atlantic Forest, Brazil

Brazil's Atlantic Forest (Mata Atlântica) is one of the Earth's five most important biodiversity "hotspots" and one of the highest priority regions for conservation in the world (UNESCO 2013). A few hundred years ago, this forest covered an area of more than 130 million hectares along the eastern coast of Brazil, the northern tip of Argentina and the eastern part of Paraguay. Within Brazil, less than 12% of the original Atlantic Forest cover remains, spread over isolated fragments less than 50 ha in size (Ribeiro et al. 2009). Most of Brazil's population (60%), economic activity (70%) and a significant amount of agriculture (including cattle, sugarcane, coffee, rubber, banana, and citrus fruit) are located in the Atlantic Forest (World Bank 2008). Due to the past degradation and considerable fragmentation of the remaining Atlantic Forest, restoration is the only means to rebuild and maintain the environmental services and genetic flux of the forest. Due to the strong interdependence between natural capital and the future of the regional and national economy, solutions to social, economic and environmental challenges cannot be addressed in isolation. Integrated landscape management interventions are being pursued in the Atlantic Forest by the PACTO pela Restauração da Mata Atlântica (Atlantic Forest Restoration PACT) and at the state level. This case study focused on activities in one state—Espírito Santo. Related to the overall PACT goals, the state of Espírito Santo has set a goal of reforesting 30,000 ha with native species in critical water areas, over the next few years. Espírito Santo's efforts demonstrate an integrated approach by linking forests, water, rural and urban resource use and demands. Furthermore, it is based on an inter-secretariat approach within government, contains innovative finance mechanisms such as PES, and has the potential for greater coordination between land use practices and access to rural credit, as well as private sector engagement and a federal and state legal framework to support integrated land use interventions.

Enabling investments

- *Payments for Ecosystem Services (enabling federal law, example of Espírito Santo's state law to implement, based on oil and gas revenues)*
- *Water fees charged to users and polluters by the watershed committees*
- *Funds from environmental compensation and impact mitigation from infrastructure projects*
- *BNDES Atlantic Forest Initiative*
- *Atlantic Forest Conservation Fund (AFCoF II)*
- *Credit for increased livestock productivity (Intensifica Pecuaria)*
- *ABC Plan*
- *(Potential) Green stock exchange (BVRio)*

Finance Innovations

- *Federal, state, multi-lateral and private investment is authorized through legislation and coordinated across actors.*
- *Access to rural credit is increasingly linked to improved land management practices. This motivates farmers to better manage land, and align their own investment with improved practices.*
- *At a state-level, Espírito Santo's Reflorestar program directs PES to landholders for improved practices in maintaining standing forest, planting seedlings for forest recovery, natural regeneration, agroforestry, silvopastoral systems and managed forests. The outcomes of the program include improved water supplies to Vitória municipality, lower water treatment costs, reduced flooding and erosion, and improved agricultural practices.*

required can greatly differ between governance phases. The ILI could be described as being of different types at different points in time and can include characteristics of multiple types at the same time. The types can be defined as follows:

Government-led or multi-lateral-led initiatives are led by government agencies in collaboration with other partners. For example, the Loess Plateau Watershed Rehabilitation Project in China achieved massive landscape restoration in an area where 50 million people lived and helped to double local incomes and improve food security. 85 percent of initiative financing from the World Bank went to the Chinese Central government to implement the initiative.

Regional initiatives or platforms are assemblages of a wide range of stakeholders converging to solve shared risks or create new opportunities. Governance can take the form of steering committees, formation of an NGO dedicated to the initiative, or be managed by a government body. Atlantic Forest Restoration PACT, Brazil is an example.

Traditional, local or community-led initiatives often form as grassroots initiatives, can create cooperative management arrangements, or morph into other types to solidify governance. Indigenous territorial management also falls into this category. An example is the case of Bosque Modelo Araucarias del alto Malleco, Chile, which formed as a grassroots initiative, but has since received significant financing from the government through their commitment to the Model Forest Network across Chile.

NGO or civil society-led initiatives often originate within these organizations, or as stakeholder platforms that either require greater administrative and financial capacity from existing organizations, or create new ones to serve this need. An example is the Succulent Karoo Programme in Namaqualand, South Africa which started as an NGO-led initiative. While some elements of the program are still led by NGOs, it is now housed in a parastatal organization, which hosts the stakeholder platform. Financing for activities has come through the Critical Ecosystem Partnership Fund and Global Environmental Facility, and still depends heavily on private foundations.

Private sector-led initiatives are driven by private-sector interests to address risks or opportunities beyond the farm- or concession-scale. These initiatives draw heavily on company operating revenues. However, partnerships created in these cases can allow private sector actors to tap sources of finance they otherwise may not easily access, such as private foundation or government funding. A case of this type is the Ethical Tea Partnership, involving Twinings, Tetley Group, Marks and

Spencer's, Kenyan Tea Development Authority, Rainforest Alliance, FLO-CERT, and the International Trade Commission.

Initiatives have access to different sources of finance depending on the partners involved. For instance, government-led initiatives in developing countries often rely on multi-lateral and development finance institution (DFI) funds. Regional initiatives and platforms rely on these funds as well, but tend to access a wider range of finance, including commodity roundtable investments (if one is involved) or even in-kind donations. Community-led or local initiatives rely more heavily on private foundations, in-kind contributions, payments for ecosystem services (PES) or locally-raised finance. Some have even created trusts or stewardship endowments, often with external support from private foundations. Large-scale private sector finance is noticeably absent from most initiatives except in certain cases where the private sector actor is leading and seeking to mitigate specific regulatory, operational or reputational risks to the business, participating in a PES scheme or investing in a certification or standards system.

These types are malleable at any given time and over the course of an ILI. Therefore, ILIs usually mix many forms of finance across types throughout the development of their work. This range of financing is reflected in the three ILI case studies that were selected using this typology as a guide to represent diverse governance and leadership characteristics (see Boxes 3-5).

Asset investment

To understand the financing needs for ILM, it is important to distinguish between asset investments and enabling investments (Elson, 2012). Asset investments build on enabling investments, which lay the institutional and policy foundations for ILM, to create tangible value that is returned back to the investor or land manager, ideally with a profit.

Within the context of ILM, asset investments support on-farm and off-farm activities that can deliver ILM's multiple returns on investment, including financial, social and environmental benefits. In some cases, financial and nonfinancial returns may be sought in the same investment. Large-scale asset investments are likely to be made by banks, government sovereign wealth funds, private equity funds and pension funds mostly through debt and equity investments (Elson, 2012; Henderson, 2013). These activities are also supported by governments and agricultural development and environmental NGOs. Smaller-scale investments are made by farmers and farmer organizations in the development of their own land and marketing potential. Categories of asset investment in ILM include:

Agriculture production practices that contribute to multiple landscape objectives

These practices lead to ecosystem-compatible production systems by minimizing pollution, modifying management of soil, water and vegetation resources in and around productive fields, and using farming systems that mimic components of natural ecosystems such as species diversity, configuration, and land cover. Some of these practices incorporate advanced modern technology (e.g. precision agriculture with geo-positioning tools), some are based on longstanding tradition and local knowledge (e.g. use of fertilizer trees, conservation tillage and rotational grazing), while some incorporate both. Farmers and agribusinesses use annual or seasonal working capital for the inputs and labor required to implement and maintain these land management systems. These investments can be self-financed by farmers and businesses or through credit.

Farm conservation or production

Often upfront investments in agriculture are required to deliver long-term financial and ecosystem benefits. Examples include improved irrigation infrastructure, on farm kerosene-based energy systems to replace biomass burning, or rainwater harvesting structures. These can also include land management operations such as forest inventories

Box 4. Succulent Karoo Ecosystem Programme, Namaqualand, South Africa

The Succulent Karoo biome extends from southern Namibia down into the southern Cape Province of South Africa, and is the world's only internationally recognized arid biodiversity hotspot. Due to the aridity, degradation from livestock use and water scarcity are both of concern. The Namaqualand Priority sub-region of the Karoo is mineral rich, and a source for diamonds, zinc, heavy sands minerals, gypsum, and granite. Wind erosion from mining sites is a long-term soil degradation concern. Most of the region is used as communal or commercial grazing. Although this land use can be compatible with the maintenance of biodiversity, overgrazing has severely degraded as much as two-thirds of this area. The Succulent Karoo Ecosystem Programme (SKEP) evolved as a bioregional conservation and development program, seeking to develop conservation as a land-use rather than instead of land-use, led by Conservation South Africa (CSA). The SKEP coordinating unit is now housed within the South African National Biodiversity Institute (SANBI), a parastatal entity.

Enabling investments

- *Critical Ecosystem Partnership Fund (CEPF): Succulent Karoo Ecosystem Programme and SKEPPIES*
- *Global Environment Facility: Support for Namaqua National Park and livelihood activities around Richtersveld Community Based Conservation Project*
- *Development Bank Of Southern Africa (DBSA), Citigroup Foundation, and the Ford Foundation: SKEPPIES*
- *DeBeers South Africa: Development of model land-use closure plan*
- *Leslie Hill Succulent Trust (administered by WWF): Land protection*
- *Municipal budget allocations: Planning and some implementation (low capacity)*
- *Federal budget allocations: SANBI and Department of the Environment and Nature Conservation staff*

Finance Innovations

- *The long-term commitment by the Critical Ecosystem Partnership Fund to invest in convening and catalyze key activities in under-funded geographic priority areas with key sectors, such as agriculture and mining, was crucial.*
- *The SKEPPIES small-grants finance mechanism provides financial assistance for economic development activities that contribute to the restoration and protection of nature.*

Box 5. Imarisha Naivasha, Lake Naivasha, Kenya

The Lake Naivasha water catchment, in the Rift Valley of Kenya, is a RAMSAR site, an Important Bird Area and on UNESCO's World Heritage tentative list. It stretches over 3,400 square kilometers, draining the Aberdare and Eburru forests. The catchments' natural abundance has attracted considerable settlement and development over the last twenty years, significantly degrading ecosystem services. Between 1963 and 2011 the population in the region increased from 43,000 to almost 750,000 people (Imarisha Naivasha Board, 2012). The lower catchment area around the Lake contains a range of land uses including pastoralism, wildlife conservation, commercial horticulture, smallholder farming, horticultural irrigation, tourism, fishing, urban development, settlement and geothermal power generation. Poor farm practices in the upper catchment, especially cultivation on steep slopes and on the riverbanks, illegal logging and charcoal burning have resulted in widespread depletion of forests, erosion and water quality concerns downstream.

The evolution of this integrated landscape initiative started twenty years ago, with identification of risks from slash-and burn agriculture in the Aberdares uplands, followed by rapid growth of the cut-flower industry in the lower catchment around Lake Naivasha. Stakeholders identified a need to collaborate to affect water quality and forest conservation. However, the drought of 2008-2009 was a defining moment that illustrated to the range of stakeholders in the watershed their environmental service exposure and risk. This experience motivated greater coherence of the integrated management needs between sectors, and Imarisha Naivasha was born as a response to this need. Imarisha Naivasha is a public-private partnership, with a board that represents all key stakeholders. The Imarisha Naivasha Board and secretariat is anchored to the government through the Kenyan Ministry of Environment, Water and Natural Resources.

Enabling investments

- *UK retailers: ASDA, Tesco, Marks and Spencer and Sainsbury's, LNGG (including Finlay's contributions as a LNGG member): Funded finalization of plans (SDAP and LNIMP), 'no-regret' activities, Imarisha operating funds*
- *German-Austrian supermarket REWE and Swiss-Coop: Funded related University of Leicester research*
- *Government of Kenya, District government, Town of Naivasha: Imarisha operational support, dedicated funding through line ministries, sewage treatment and water provision and management in Naivasha town*
- *Kenyan Embassy of the Kingdom of the Netherlands and Regional Water Authorities in the Netherlands: Programme on integrated water resources management and capacity building of institutions, hydrological models*
- *CIDA – Canada, GIZ – Germany: Water stewardship*
- *UK DfID: Support to WWF- Climate change scoping and adaptability*
- *NGO and development partners, WWF, SNV, Twente University (ITC): Water resources management pass-through grants/investments*
- *Equity Bank, Kenya: Low-interest loans for small-scale dams*

Finance Innovations

- *Water user fees: local water user associations play a larger role in collecting fees and monitoring water use. Imarisha is investigating how a surcharge on all water use fees could support basin sustainability.*
- *There is PES for some upper catchment farmers; however, unclear how to scale from >1000 farmers to 250,000 smallholders.*
- *There is a proposal for the Lake Naivasha Basin PPP Sustainable Development Fund (LNB-3P-SDF), which would be funded by a price premium from Naivasha flowers sold in the EU, water user fees, and other revenues.*

and cut block plans, or on-farm investments in seed stock and nutrient management. These can be self-financed or receive some combination of credit or grant funding.

Restoration or protection of natural assets on public or private lands

These include investments in ecosystems such as the establishment and maintenance of protected areas, biodiversity habitat networks and riparian, mangrove or wetlands restoration. Although these do not usually yield financial returns on their own, they can protect or enhance the performance of profit-generating investments, as well as generate flows of non-economic services like clean water and biodiversity. These activities are typically paid for by various kinds of conservation finance from governments, NGOs and foundations as well as by payments for ecosystem services schemes directed towards carbon mitigation or watershed conservation.

Environmentally and socially responsible enterprises

Agricultural markets are beginning to place value not just on the quality of agricultural products, but also on the environmental and social performance of production and processing. Mechanisms for product differentiation include organic production standards; requirements of exporting bodies; sourcing guidelines of international food companies; and third-party eco- standards, such as Fairtrade, Rainforest Alliance, and Forest Stewardship Council. Compliance with such standards can offer a significant business opportunity for producers by enabling them to receive price premiums for their products; increasing access to foreign markets or niche markets; and ensuring more stable or guaranteed demand for their products. These investments are usually financed by debt or equity.

Large-scale green infrastructure

Road, rail, energy, storage, dam construction, human settlement and other infrastructure projects to be implemented in support of agricultural development will have major impacts on the environment. The construction phase can involve extensive earth-moving and habitat disruption, sedimentation and disruption of waterways and release of toxic chemicals into air, water and land, if not carefully planned and implemented. The choice of spatial layout, materials used and the energy efficiency of systems can have long-term consequences. It is critical that environmentally responsible designs and processes be used. Investments can be made in 'green infrastructure', including the creative use of green spaces and farmed areas to provide water quality, waste processing and other essential services. Benefits can often include large operational cost savings over the life of the infrastructure, and avoidance

of costs to other businesses and communities. These investments are financed by debt or equity as well as public/private partnerships.

Enabling investment

Enabling investments lay the institutional and policy foundation for asset investments by generating incentives to invest in a particular activity, usually with no immediate expectation of financial rewards (Elson, 2012.) While there is a literature on enabling investments broadly, the enabling conditions elaborated below apply specifically to ILM.

Stakeholder engagement and cooperation

For an ILI to develop there must be a critical mass of stakeholders who are interested in undergoing a collaborative process to manage the landscape. This includes both stakeholders within the landscape, such as producers' organizations, local government entities and local businesses, as well as stakeholders outside of the landscape at regional, national or even international levels. Coordination requires an appropriate institutional structure that permits negotiation, democratic decision making, and trust-building between stakeholders.

Appropriate legal and regulatory framework

The complexities of ILM are mitigated when laws and regulations are supportive and coherent within a landscape. Because most national and sub-national policy and legal frameworks separate the policy-making process across sectors (e.g. agriculture, environment, rural livelihoods) as well as across jurisdictions and levels of government, the laws and regulations that apply to a specific landscape are often contradictory or incoherent. Furthermore, for ILM to develop, appropriate resource rights and tenure systems must be in place. Secure property and resource access rights are needed for individual land users to invest in long-term strategies. Additionally, for just decisions to arise from multi-stakeholder collaboration, all stakeholders must share the power to decide how resources are used.

Knowledge and capacity to plan and manage on a landscape scale

Planning and managing at a landscape scale requires specific knowledge and capacities. First, spatial information, such as maps of important areas for biodiversity, agriculture and hydrology, is essential in order to plan strategically for a multi-functional landscape that capitalizes on the synergies between different land uses. Similarly, the adoption of ILM requires technical information and capacity. Research to develop inno-

vative farming systems that account for ecosystem dynamics, improved varieties of crops, and enhanced biodiversity conservation techniques is needed in order for an ILI to meet its diverse demands. Finally, in order to monitor and evaluate the impacts of changes at a landscape scale, metrics that measure multiple outcomes, including agricultural, environmental and livelihoods outcomes, across broad scales are also needed. These metrics should feed back into local decision-making processes, so that as circumstances change, the management of the landscape can adapt.

Incentive mechanisms

Even if the stakeholders are motivated and there is an appropriate legal and regulatory framework, the establishment of an integrated ILI often also requires appropriate market-based incentive mechanisms that attract finance to ILM activities. These can include higher premiums for selling eco-certified products, payment for the provision of ecosystem services, or direct subsidies or taxes on certain practices. Incentives at the farm level are crucial, as farmers often lack access to the capital required to make the necessary changes.

Successful ILM requires the appropriate blending of asset and enabling investment and financing institutions with the experience to recognize the opportunities in both spheres.

Institutions and mechanisms that finance ILM

» *This section provides a snapshot of the ways that financial institutions and mechanisms are structuring investments and coordinating with other finance sources within a landscape.*

» *Finance comes from a wide variety of public and private sector actors with diverse motivations and mechanisms for investment.*

Varieties of ILM financing actors

ILM finance is provided by the full range of public and private financial actors, from a private investor's motivation for purely financial returns to a government's or NGO's objective to provide public goods. In between these two ends of the spectrum, there are actors with multiple priorities, including social and environmental impact investors and development finance institutions (DFIs). These investors targeting multiple priorities recognize that their short-term financial returns may be lower than what would be expected by a purely private investor, yet they still expect a financial return alongside their other objectives.

Public and civic sector investments

Public and civic sector investments usually provide the foundation for building the enabling conditions that improve the competitiveness of ILM-related activities versus more conventional alternatives. These enabling investments support policy development and implementation, institutional frameworks, technical capacity, and investment plans in order to leverage larger volumes of finance for asset investments from the private sector.

In addition to supporting public goods, some public and civic sector finance is profit seeking, although it may not be profit maximizing. Much of this finance is deployed through grants and concessional loans. While institutionally, many of the relevant

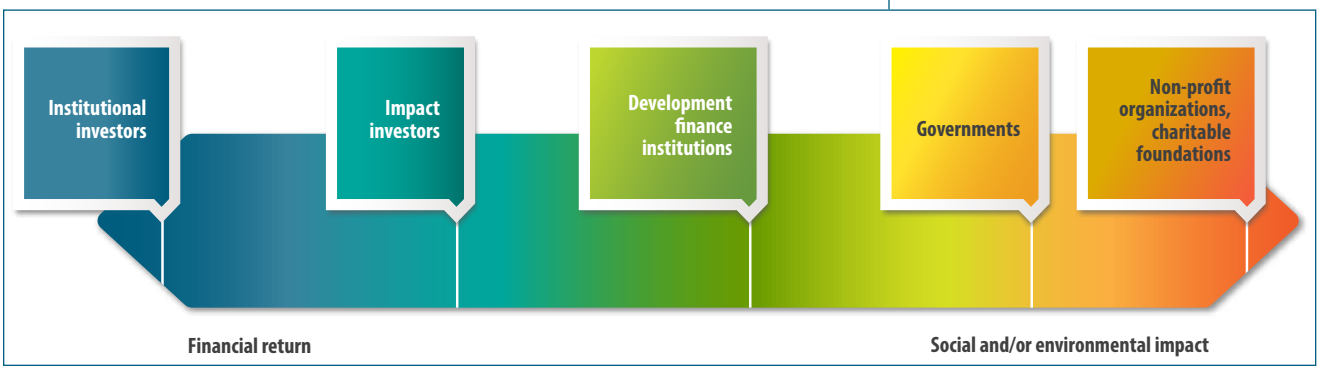

Figure 3. *Motivations across financial actors. Adapted from Dalberg (2012).*

public sector agencies have a broad remit across multiple ILM components, the mechanisms through which funds are disbursed are often heavily siloed, focusing separately on food security and agricultural productivity, climate mitigation or adaptation, REDD+, gender, water supply and sanitation, biodiversity, disaster risk response, or poverty reduction. The role of DFIs was critical in many of the cases studied, especially to providing early-stage capital, which is often accompanied by technical support and partnerships to strengthen landscape initiatives. Other public institutions contribute to enabling investments through technical support rather than direct funding. The Global Mechanism, for example, provides brokering services (i.e. partnership facilitation, dialogue platforms, investment structuring) to build capacity for more integrated financing of sustainable land management (SLM).

Private sector investments

Private investors and companies are concerned primarily with financial returns and the associated levels of risk. Even for impact investors, a positive financial return on investment is expected, although it tends to be lower than comparable conventional investments, with social and environmental outcomes considered to be an important element of the total return. Private finance sources and intermediaries are extremely diverse. They include very large actors, such as pension funds, sovereign wealth funds, insurance companies, national banks, high net worth individuals and large agribusinesses, as well as relatively smaller actors,

	Enabling Investment			Asset Investment			
Investor	Government	Donors Philanthropists	Rights-holders Product investors, Philanthropists	Private sector companies	Philanthropists	Banks	Private investors and equity funds
Vehicle	Projects, Policy	NGOs, Research & policy institutions	Small businesses Intermediaries	Capital Expenditure Research & Development	Capital investment	Financial services	Risk-adjusted return on capital
Mechanism	Public expenditure: Infrastructure Fiscal reform Regulatory reform Subsidies	Grants: Organisational & policy development Institutional reform	Enterprise Philanthropy Grants & seed funding to demonstrate validity of business model	Purchase of capital assets	Impact investment via equity, loans	Loans secured against assets	Investment via equity or loans
Output	Public Goods			Private Assets			

Figure 4. *Description of the investment vehicles, mechanisms and outputs for ILM investments. Adapted from Elson (2012).*

including microfinance institutions, informal money lenders, as well as farmers and their family and friends.

Private sector actors engage in components of ILM through a range of instruments that can vary over the lifecycle of an ILI. They might include equity and debt investments to cover some of the upfront investment requirements; carbon finance; financial services, such as insurance and reinsurance products (e.g. crop insurance or underwriting green bonds); as

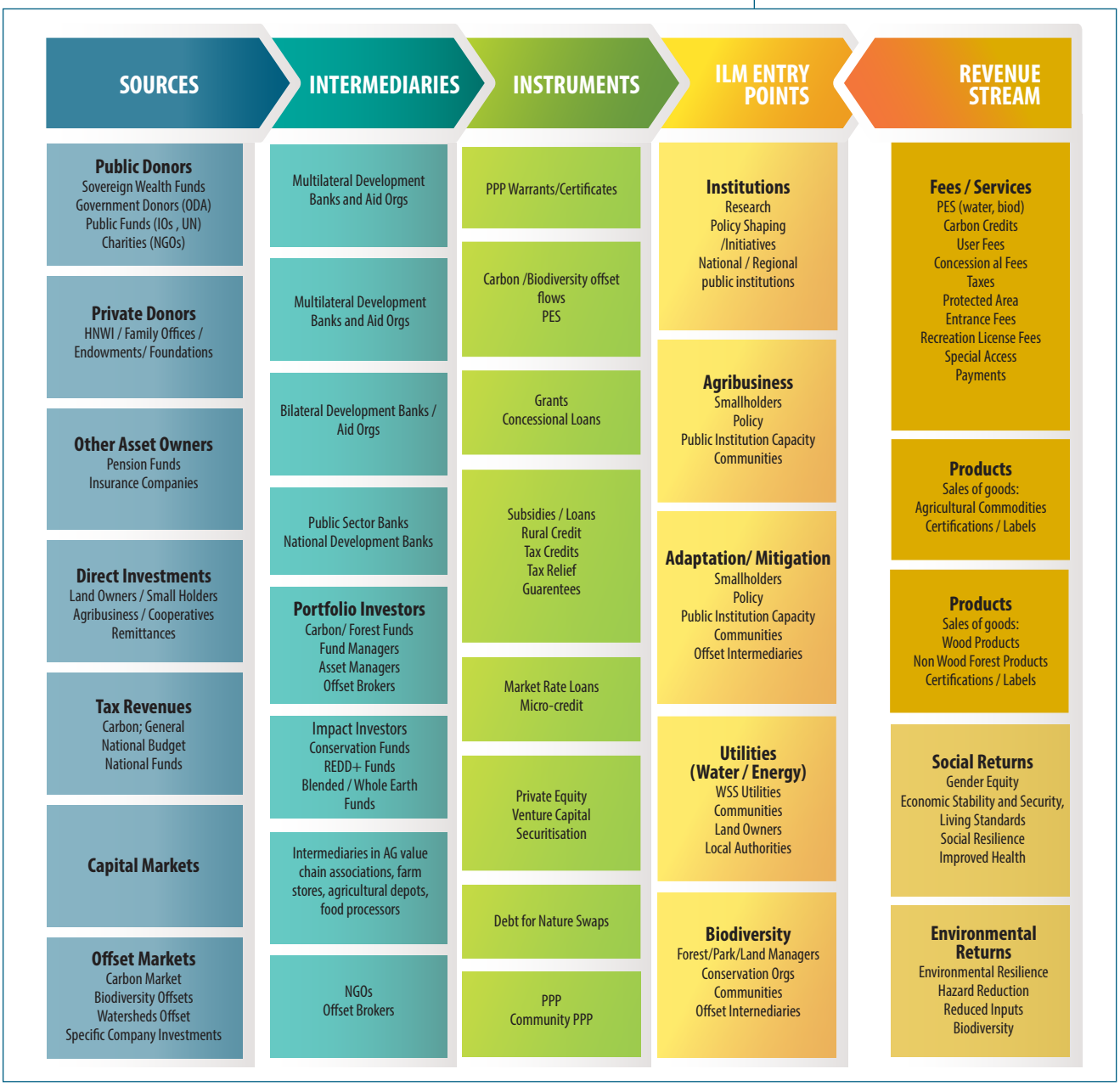

Figure 5. *Mapping the flow of ILM finance from the source of finance to the revenue stream. Framework developed from Buchner et al. (2011).*

well as direct investments of capital and labor in sustainable agriculture, small-holder livelihoods, conservation and community development. Farmland equity investments have attracted increasing investor interest, with a small, but growing focus on SLM practices (Hopper 2012).

Public-private partnerships

ILIs are almost always public-private partnerships (PPPs) of some sort, and they are financed by diverse institutional actors and mechanisms that require the participation of both public and private funding sources to overcome a range of barriers related not only to capital constraints, but also coordination, policy, technology and information. These partnerships bring together various combinations of private companies, governments, NGOs and development organizations. These partnerships can allow stakeholders to tap into sources of finance that would otherwise not be available to them. For instance, funds from the floriculture and oil and gas industries are used to address smallholder agriculture practices in Imarisha Naivasha, Kenya. Viable PPPs demonstrate to private and public investors that partnerships based on trust will reduce their investment risk in a given landscape.

There is considerable variation in PPP financing mechanisms that have been used to support ILM including Debt for Nature Swaps (e.g. World Wildlife Fund, Conservation International, Citibank); investment funds for carbon offsets or REDD+ projects (i.e. Livelihoods Fund, Macquarie BioCarbon Group Pte; Deutsche Bank's African Agriculture and Trade Investment Fund); biodiversity offset payments (e.g. AngloAmerican, SAB Miller); and coordination of ILM relevant investments in green corridors (e.g., Southern Agricultural Growth Corridor of Tanzania (SAGCOT)). These arrangements allow public and philanthropic actors to achieve greater impact than they could on their own, while private sector partners are incentivized to participate in order to reduce environmental risk in their supply chain, to fulfil corporate social responsibility (CSR) goals, to maintain a 'license to operate,' and sometimes to access new markets by raising their profile in emerging economies. Figure 4 summarizes the types of ILM financing actors, their corresponding investment vehicles, and differences between enabling and asset investments.

Mapping the flow of ILM finance

Figures 5 and 6 provide an overview of the results of the finance mechanism and institution survey presented in two ways. Figure 5 represents ILM financial flows, including sources, intermediaries, and instruments, as well the revenue streams flowing back to investors. Figure 6 illustrates how finance is distributed across the public versus

Figure 6. *Four way matrix mapping out key examples of public and private mechanisms for enabling and asset investments*

private sectors and whether these are enabling or asset investments. The different boxes show the array of financial institutions and mechanisms used across the range of ILM objectives (represented by different colors). The text at the corner of each quadrant details the different financial instruments typically utilized for each quadrant. This figure represents a high-level synthesis of general trends. For a review of the methods, categories, data and further analysis refer to the Review of Financing Institutions and Mechanisms (Hill Clarvis 2014).[3]

3. Find this document and its supporting case studies at landscapes.ecoagriculture.org/global_review/financingstrategies

The sequencing of ILM finance

In addition to diversity in the types of investments that various actors finance, the study of ILIs revealed how the mix of actors changes over time in relation to the life of a given ILI. Figure 7 illustrates this financing sequence. In the early stages, finance is needed to support enabling investments in stakeholder coordination, concept testing and capacity building. This is often provided by philanthropic, national public sector and DFI grants or, in some cases, local government funds. At this stage, proto-initiatives are seeking to identify integrated solutions to complex landscape issues, and they need the flexibility to develop their

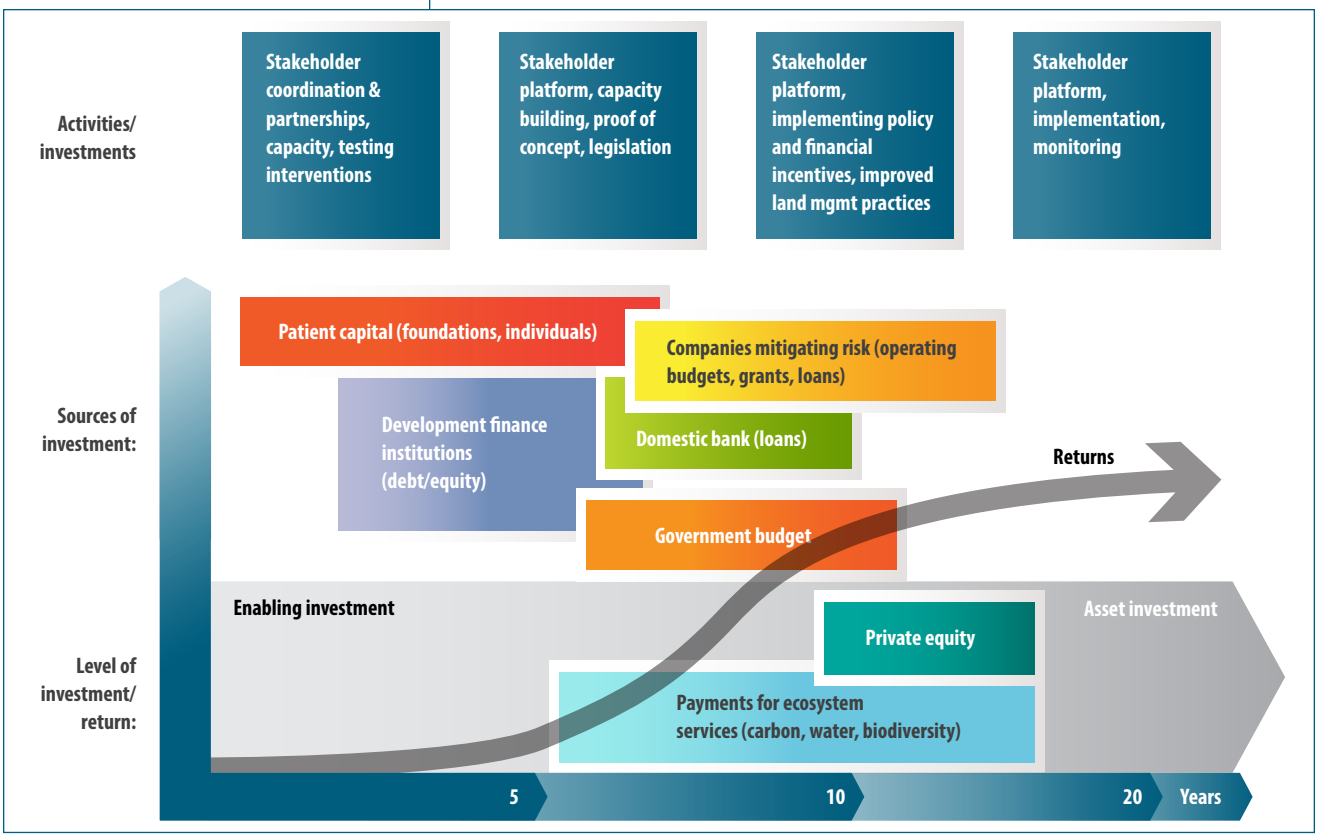

Figure 7. *ILI investment needs and finance actors over time*

joint goals as they gather information and negotiate roles.

Initiatives usually spend a few years in this process in order to develop a cohesive vision across multiple sectors and actors. Even if commercial investments are made in this first five years, they often come in the form of partnership development and pilot testing. Investments for these activities may provide below market returns in the short-term.

Once initiatives pass roughly the five-year mark, their sources of finance diversify. The extent of this diversification depends on the strength of the stakeholder platform, leadership, and the proof of concept of key activities. In this stage, initiatives may capture more CSR commitments; investments made by companies seeking to mitigate reputational or operational risks; domestic banks willing to offer below-market capital; or even allocation by government budget line items (this occurs much earlier for government-led initiatives). Innovative finance mechanisms, such as PES, catalytic loan facilities, or other sources of finance to landholders rarely occur before the five-year mark unless they are smaller pilots.

The balance of the need for up-front and long-term enabling investment differs for each ILI, but the investment arrow bar at the base of Figure 7 represents a general trend, in which enabling investments come first, asset investments later, with enabling investments continuing over time. The returns line in Figure 7 illustrates an increase in financial returns to landholders and investors, as well as the increased value in natural capital, which is crucial for long-term financial returns from ecosystem services. Over this period, there is a transition from enabling investment and patient capital, which do not require short-term returns, to other stakeholder operating funds and asset investments by landholders, as potential financial returns increase and new financial institutions begin to see investment opportunities. For instance, patient capital deployed in the PACT, Atlantic Forest, Brazil case supported development of key enabling policies and incentive mechanisms. The targeted incentive mechanisms were a means to promote landholder and ecosystem service user investments to be directed to aligned activities. These included water fees charged to users and polluters by watershed committees across the Atlantic Forest and the PES scheme in Espírito Santo. Different sources of finance are better suited to certain stages in the development and implementation of an ILI, based on the investor's desired expected timeframe for returns, investment size, and risk appetite.

The studies of financial institutions and mechanisms and ILIs revealed the central challenges for cultivating additional asset investment as well as how and why the impact of

many enabling investments has been limited. The following two sections describe these challenges. For asset investment, mismatches in the investment time horizon, investment size and the risk-return ratio have led to a financing gap for certain ILM investments. Meanwhile, the effect of enabling investment is limited by the siloing within public sector institutions. Institutional planning and stakeholder coordination are directly linked to success in reaching measurable outcomes, yet are underappreciated by investors in the ILM enabling environment.

Coffee drying facility in El Salvador. Photo by Seth Shames/EcoAgriculture Partners.

Asset investment challenges

» *There are three major constraints to mobilizing finance for ILM asset investments: short time horizons required for returns by most investors, a mismatch between investment stake and size of investment opportunities, and high investment risk versus return potential.*

Time horizon

Investors want quick results

Due to the time needed to develop the enabling conditions for landscape scale activities, ILM asset investors who wish to engage at the beginning of this process will generally have to forgo immediate returns and accept a longer period of time before they receive a return on their investment. This delay is one of the most significant barriers to raising funds for asset investment during the early stages of an initiative. However, a number of the case studies highlight venture capital and private equity vehicles which are more aligned with ILM timescales. These are funds with a fixed amount of capital available for a set of specific company or project investments for a holding period of around six to ten years.

Investment size

Mismatch between investment stake and size of investment opportunities

While the potential for investment in a given landscape could be large enough to attract institutional investors, the case studies demonstrate that, so far, investments in landscapes tend to be piecemeal. Institutional investors often find the average direct deal sizes of impact investment funds, where much of the ILM asset investment is currently taking place, to be too small to engage. For example, a traditional private equity firms' average growth capital deals are estimated at USD 36 million (WEF 2013) , while the size of deals made by the Moringa, Althelia Climate and Eco Enterprise funds (highlighted in the case studies) are, respectively, USD 5.5-14 m, 10 m, and 3 m. Even a development bank might have a minimum threshold of USD 5-10 million.

Risk/return ratio

Some investments are still too risky for most investors

The risk to return ratio for ILM investments is unattractive for most potential finance decision-makers. The lack of demonstrated experience developing scalable deals and the low returns of many of the small ILM-supporting funds highlighted in the case studies have limited their ability to attract larger-scale institutional investment (WEF 2013). In

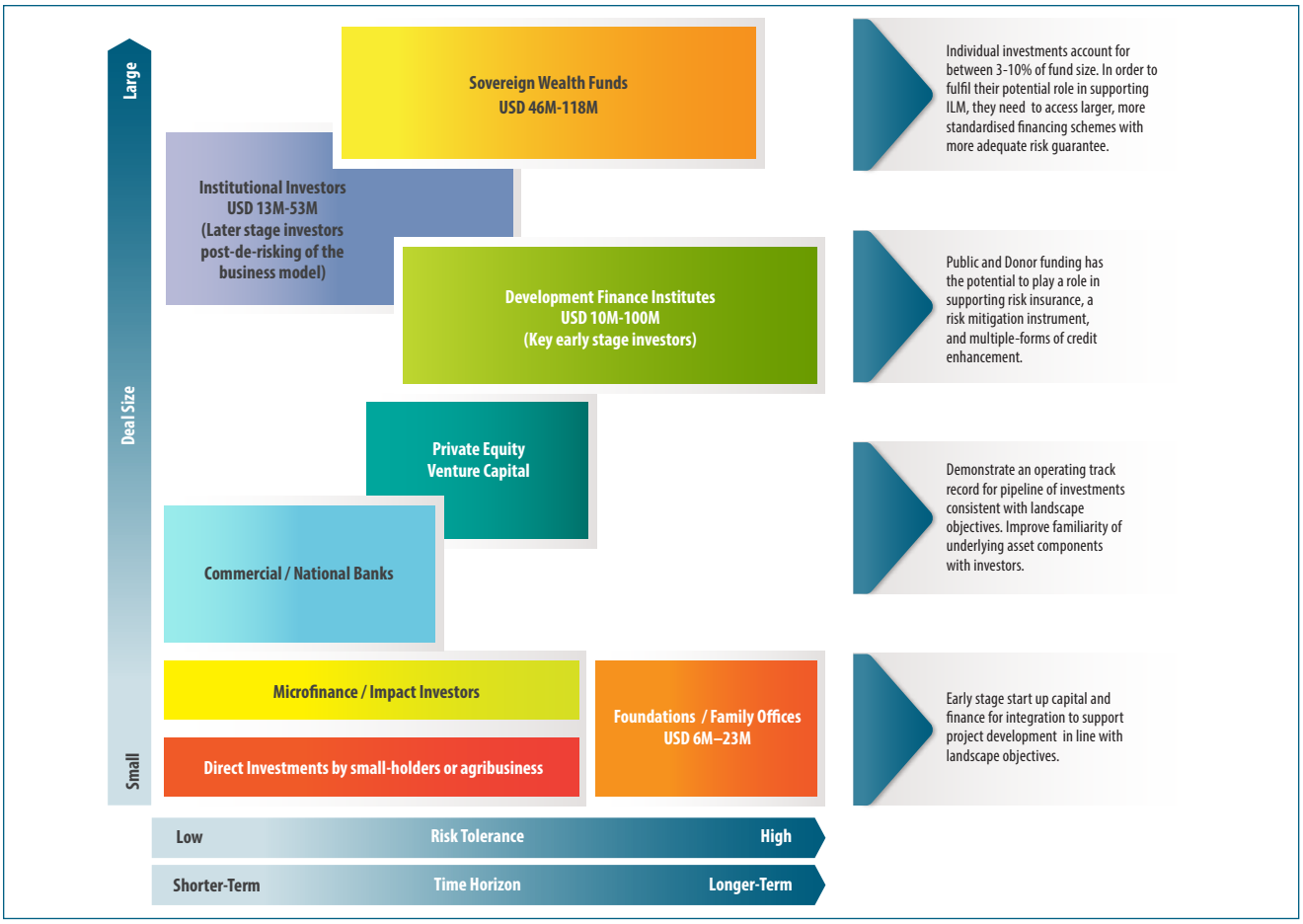

Figure 8. *Different scales of investors and lenders according to the size of the deal, level of risk and time horizon for investment return (Dalberg, 2012).*

some cases, potential investors face uncertainty about what the risks would be, and are, therefore, not even able to use their risk assessment tools to evaluate potential investments. Investors also face potentially high transaction costs associated with complex processes of due diligence and the need to interact with other landscape stakeholders. Furthermore, in emerging and frontier economies with generally weak business enabling environments, the lack of liquid public markets and lack of investment funds (Groh et al. 2013) further limits the capital that can be raised for both impact oriented and traditional commercial funds (Dalberg 2012). Equity investments in ILM in these countries may also offer limited exit opportunities once the funded enterprise has achieved the desired stage of capitalization and maturity (Dalberg, 2012).

Short time horizons, a mismatch between investment stake and size of investment opportunities, and high investment risk versus return

potential lead to investment gaps for ILM, as illustrated in Figure 8. The USD amounts within relevant boxes depict the average range of individual investment committed to private equity in 2012 (with an assumption that individual investments can account for between three to ten percent of fund size) (WEF, 2013). The text to the right hand side of the graph highlights the core challenges and potential pathways available to the range of investors for scaling up ILM supportive investments.

From a lending perspective, a variety of obstacles remain to accessing capital. In the case of REDD+ financing for example, many forest enterprises are SMEs that may be too big for local finance sources but too small for international sources of finance. Lending policies also often favor short-term options with low risks, with banks eager to minimize administrative costs through economies of scale (i.e. favoring larger loans) (Boscolo et al., 2007). At the bottom of the pyramid, small holders already face multiple barriers to accessing credit for investing in on- and off-farm activities, where land rights are often obscure, yet the majority of agricultural investment occurs directly through farmers themselves (Assunção et al., 2013). The case studies have demonstrated that these circumstances have driven investors, lenders and companies to make targeted interventions in the value chain to either establish financial services for unbankable farmers (e.g. Rabo Development and USAID) or to enhance economic and revenue diversification (e.g. BEM, Moringa, Althelia) in order to improve the business case to support the development of projects' landscape supporting components.

Enabling investment challenges

» *Challenges for ILM enabling investments include the silos of public sector institutions, the underfunding of landscape initiative establishment and coordination, and the difficulty of appropriately targeting enabling investments to promote asset investments.*

Public sector silos

The case study findings confirm that ILIs largely tap sector-based funds. Focal points for potentially integrative initiatives, such as REDD+, tend to sit in the forestry or environment ministries, limiting the ability of individual decision-makers to articulate a full range of benefits from ILM or to define multi-objective finance opportunities. Public sector financial institutions, such as the GEF, are structured along similar lines and must deliver on objectives that are sectorally defined (e.g. biodiversity, climate change, land degradation). This sectoral separation limits the ability of ILM champions to make their case to finance ministries. As a result, there is often a piecemeal and siloed approach to land-based activities which leads to pockets of projects focused on potentially synergistic, but separately implemented activities such as agroforestry, climate mitigation, and rural energy. There is potential to better integrate these separate approaches particularly as climate finance institutions emerge if their managers recognize the potential synergies of collaboration.

At the ILI level, the challenge has been to develop mechanisms to integrate these sectoral finance opportunities. For example, in the PACT, Atlantic Forest case, the finance used to stimulate changes in land use practices comes from several sources, including water fees and environmental impact mitigation funds, and these require integrated deployment at the farm- or concession-scale. Similarly with Imarisha Naivasha, in Kenya, sector-based funds dominate the finance profile, with a significant focus on water. The role of the stakeholder platform, or the convener of the initiative, is often to coordinate these sector-based funds, to support stakeholders in accessing funds, or to leverage multiple finance sources.

Underfunded ILI coordination

Institutional planning and coordination is the activity in which ILI stakeholder groups invest most heavily (Milder et al. 2014; Estrada-Carmona, et al. 2014.) However, many domestic and international public and philanthropic actors prefer demonstrable outcomes (e.g. hectares protected, smallholder incomes

raised, water quality improvement) to the institutional planning and stakeholder coordination that is necessary to produce these outcomes in the context of ILM. Furthermore, funding cycles usually operate on time frames shorter than those required to generate benefits from the establishment of the enabling conditions that lead to a robust ILI. Consequently, while institutional planning and stakeholder coordination processes are directly linked to success in reaching measurable outcomes, they are often underfinanced.

One way that ILIs handle these challenges is to approach public sector agencies and donors to fund concrete outcomes and then steer some of the funds to institutional strengthening and stakeholder engagement, transportation to meetings, mediation and other functions that may not be an explicit priority for the funder. Other innovative funds target these enabling investments. For example, in both the PACT, Atlantic Forest and Succulent Karoo Ecosystem Programme, Namaqualand case studies, the Critical Ecosystem Partnership Fund (CEPF) has specifically invested in institutional planning and stakeholder coordination over the first five years of the initiative, with a goal of transitioning the operational costs of their project to other partners over time.

Strong leadership within the landscape initiative is a key ingredient to navigating these upfront finance and coordination issues, and to maintain a vision for ILM. Initiatives without a stable, focused leader struggled to obtain finance.

Incentives for asset investment

There is a clear need for public and civic actors to help define how private actors can invest, through the establishment of the appropriate enabling conditions and supporting partnerships. Land allocation, land-use planning and land tenure are key issues that resist simple solutions, but any ILM or larger scale green growth program must plan and allocate land efficiently and appropriately given the spatial configuration of a given landscape. Water planning and allocation issues are also critical and likely to become more so as population growth and economic development increase water demands. These efforts will face challenges coordinating across the relevant regulations, agencies and authorities. Access to land for production could also be a significant bottleneck for private sector investment in landscapes. Village and district planning processes and a functioning land bank could ensure a predictable, efficient process for acquiring suitable land for agricultural investment and maintaining clear, enforceable rights and obligations.

These plans would clearly identify 'go' and 'no-go' areas.

The public sector can also identify how risk guarantees (for credit, market, operational, reputational and legal risks) can incentivize new market innovation. Instruments such as first-loss protection and partial guarantees that shield investors from a pre-defined amount of financial loss are required to enhance credit worthiness and improve the financial profile of ILM investments (Hervé-Mignucci et al., 2013).

There have been innovative efforts in this area which have provided incentives for the private sector to invest in landscape activities as well as to form partnerships with small-scale farmers and larger strategic alliances along specific value chains (GDP, 2013). Examples of these initiatives include the Initiative for Sustainable Forest Landscape (ISFL) and the Global Mechanism. The ILI case studies each demonstrate context-specific prioritization of investments based on strategic assessments of how to direct finance to achieve the greatest impact for shared outcomes.

Recommendations for investors in integrated landscapes

» *Strengthen the enabling investments for ILM. Improve the ILM business case; mobilize public and civic sector finance; coordinate sectoral investment plans at the landscape scale; and forge new partnerships between financial institutions and landscape stakeholders.*

» *Develop financial mechanisms to attract private sector asset investors to ILM. Utilize public funds to reduce private investor risks; use REDD+ funds and other targeted financial flows to catalyze asset investments; structure financial mechanisms to bridge asset investments across landscapes; and employ investment standards and guidelines to incentivize ILM investments.*

Strengthen enabling investments

Clarify, quantify and communicate the ILM business case

Private sector actors, for the most part, would like to invest in proven business models, with clear and predictable revenue streams. Meanwhile, engagement in ILM can be a strategy for businesses and financial actors to manage supply chain risk and identify new business opportunities in the form of markets for certified products and ecosystem services. Unfortunately, finance institutions lack the tools to assess the benefits of landscape investments. A central challenge for investors to engage in ILM is the difficulty they face in calculating expected returns over time. This task is challenging enough for cases in which investments are made in ecosystem improvements which are designed to translate into purely financial benefits from agriculture, forestry, or water over time. The analysis is further complicated when ecosystems and community benefits are valued directly by the investor, as is the case with impact investors, development and conservation organizations, and many public agencies.

Financial decision-makers need more rigorous risk analysis tools to identify the risks of action and inaction within a landscape and which landscape investments represent viable business models. Similarly, all landscape stakeholders will benefit from investments in informed decision-making processes (e.g. science-based research, economic projections) in order to pursue ILM and to understand its value. While there will not be a single 'business case for ILM,'

Maize grain stored in metal silo, Kenya. Photo by CIMMYT on Flickr.

investors will be convinced by seeing the success of their peers operating in similar conditions.

Mobilize public and civil society sector finance for enabling investments

The establishment of enabling conditions for ILM—including stakeholder engagement and cooperation, appropriate legal and regulatory frameworks, the development of landscape management capacity and information systems required for landscape decision-making—is a prerequisite to the long-term success of ILM. The first five to ten years of an initiative lays the foundation for future asset investments, and experience has shown that when this process is not allowed to fully mature before large-scale investments are made these investments are often unsuccessful, and the momentum for the initiative diminishes. Unfortunately, the importance of these enabling investments can be underappreciated by financial actors in the position to support them. Public and civic sector institutions usually play a lead role in the financing of these activities. However, in cases where these institutions are weak, private sector actors who wish to engage in the landscape may need to finance enabling investments even in cases where the ILI is led by others.

Coordinate sectoral investments at the landscape scale to achieve inclusive green growth

Coordination of investments across sectors can increase the efficiency and effectiveness of ILM funding programs, particularly where individual sectoral investments yield multiple agricultural, livelihood, conservation and climate benefits. Momentum for integrated planning, generally, has taken hold over the past few years as the concept of 'green growth' has gained popularity in some international and national policymaking communities. This framework has led to the development of a number of 'green growth corridors' such as the SAGCOT corridor in Tanzania. As these initiatives progress, their organizers and investors will need to recognize that while coordination of investments is necessary at the national and regional levels, the details are operationalized at a landscape scale. Therefore, integrated, green growth initiatives should invest in the enabling conditions for ILM.

Sectoral coordination will also be critical as climate finance institutions emerge at local, national and international levels. Public finance mechanisms such as the GEF and the International Fund for Agricultural Development (IFAD) have made progress in assisting countries to receive funding for multi-focal area projects that target landscape-scale challenges and mainstream climate priorities and finance into sector

specific planning. The Global Mechanism provides capacity to countries to coordinate finance for sustainable land management. These efforts could be used as models in the design of the Green Climate Fund (GCF) for how supplementing sector specific funds with climate finance can catalyze ILM.

Foster new partnerships between financial institutions and landscape stakeholders

One of the more subtle barriers for private financial institutions to support ILM might be that they are not seen as obvious partners by other actors in the landscape, and their political power may even be threatening to other stakeholders. Furthermore, the larger private actors often do not see the benefit of participating in ILIs. These factors may explain why so little outside private sector engagement has been observed in ILIs. To overcome these barriers, explicit efforts will need to be made to develop partnerships based on trust and mutual benefit between large financial actors and other landscape stakeholders.

In the ILI case studies, potential partnerships between ILIs and financial institutions were identified although they were not fully developed. For example, The Atlantic Forest PACT in Brazil has cultivated a partnership between their stakeholder platform and Brazilian National Development Bank (BNDES). While BNDES oversees management of climate funds, the Amazon Fund, Mata Atlântica Fund, ABC Plan credit lines, and rural credit programmes, it does not have an explicit mandate to oversee integrated finance in the Atlantic Forest. More concerted effort by BNDES to blend and integrate financing between these funds to serve ILM for both restoration and production needs would strategically focus these investments at farm- and landscape-scales.

Partnerships with DFIs, in particular, could help define investment entry and exit pathways for large-scale investors within the context of ILM, particularly if their mandate is to deploy multi-functional finance packages. More piloting of these kinds of partnerships is needed to clarify how they can best work.

Develop financial mechanisms to attract asset investors

Utilize public finance to reduce private sector risk

Public finance will need to lay the groundwork for improved enabling conditions for ILM. These financial mechanisms will help to address the structural challenges that private investors face in accessing capital to invest in ILM, particularly in difficult economic and political conditions. Risk guarantees may be required for credit, market, operational, reputational and legal risks to attract investment where there is a limited

track record. Instruments such as first-loss protection and partial guarantees that shield investors from a pre-defined amount of financial loss can enhance credit worthiness and improve the financial profile of ILM investments. Investment risk can also be mitigated through a mix of diversification, certification and the provision of advanced market commitments, as well as by applying environmental and social risk standards.

Public financing can also play an important role in providing acceleration and seed capital for early stage agriculture and renewable energy ventures (e.g. UNEP's Seed Capital Assistance Facility) that can thrive within an ILM context. The civic sector also has a role in accelerating this innovation phase of ILM, so that additional commercial investment, not just public funding and finance, can be catalyzed. A dedicated catalytic fund within a region or landscape can serve as a mechanism in which patient capital de-risks shorter-term investments in agricultural production, water infrastructure or forest protection/restoration. These funds can also provide the means and incentives for landscape actors to convene, and begin to apply standards and guidelines for investments within a given landscape. The Beira Corridor Agricultural Growth Program in Mozambique operates one such fund, providing social venture capital to support early-stage business development to spur commercially-viable agriculture. The SKEPPIES program from the Succulent Karoo Ecosystem Programme, Namaqualand, South Africa case study is another example of a fund with a similar purpose.

Use REDD+ and other targeted financial flows for enabling investments that catalyze asset investments

ILM can be a foundation on which REDD+ funds can be used to move beyond offsetting and support the development of long-term sustainable economic activities. The financial institution case studies demonstrate the difficulty that REDD+ projects have sustaining themselves solely on the proceeds of carbon credits. In the Althelia, Moringa, BEM and World Bank Biocarbon Fund (BioCF) cases, although REDD+ generated carbon credits were initial entry points for investments, targeted interventions in product value chains have been necessary for the overall business case for REDD+ projects components.

Insights from the landscape initiative case studies point to the potential of REDD+ as a finance source for ILM. While the Amazon Fund does allow for some funds to be allocated to the Atlantic forest when used for monitoring purposes, the Amazon is Brazil's priority region for REDD+. The experience in the Atlantic Forest is similar to many priority REDD+ landscapes around the world that include a mosaic of land uses, and

thus illustrates the importance of integrating forest-sector activities into broader landscape approaches in mosaic forest contexts. It also demonstrates the importance of a strong legal framework for forest conservation and restoration within agricultural landscapes, information systems (Brazil's CAR and also INPE satellite monitoring) for spatial monitoring of legal compliance, access to credit being linked to legal compliance, and targeted incentives that help promote legal compliance, such as payments for ecosystem services.

Structure financial mechanisms to bridge asset investments across landscapes

Increasing the amount of asset investment targeted towards ILM will require not only an upscaling and appropriate targeting of enabling investment, but also the development of financial mechanisms that can help to bridge the gap between the types of investments that financial institutions are organized to make and those that are required in many ILM contexts. As previously described, there is a role for the public sector in reducing risk and providing catalytic funds to attract asset investments, but a variety of innovative financial mechanisms described in detail in the case studies can also be used as models to help bridge this gap. For example, the Landscape Fund is designing a networked financing approach to attract investment in sustainable land-use practices among smallholders. It drives down the risk associated with these investments by aggregating large numbers of smallholders and using long-term bonds and a risk guarantee mechanism. The third tranche of the World Bank BioCarbon Fund (BioCF) will seek to scale up climate-smart land use and deliver multiple landscape-level benefits by investing in carbon mitigation, reforestation, agriculture, and biomass energy while orchestrating a range of parallel incentives and technical assistance to develop the enabling environment for ILM. Grasslands, LLC identifies attractive ranch real estate investments, raises investor capital to purchase the assets, and then engages in long-term management contracts on the acquired properties, with a goal of developing a 'ranch real estate fund', with ecological benefits, solid financial returns, and long term stability for rural communities. Total land under management was nearly 150,000 hectares in the first quarter of 2014. The study found no private investment funds that focus explicitly on the spatial integration of its own investments within a landscape, however there are a number of burgeoning models that can finance components of ILM, such as Althelia, Moringa and Agro-Ecological, and their managers are interested in contributing to landscape-scale impacts.

Employ investment standards and guidelines to incentivize ILM investments

Social and environmental standards and guidelines are important tools to help investors distinguish between investments that may result in higher reputational or operational risk and those that will not. These instruments also provide governments, local communities and civil society actors assurances that social and environmental risks of a given investment will be minimized. However, there is a large disconnect between standards and guidelines and workable project-level metrics on social and environmental performance. Very few, if any, contain criteria specific to risks beyond the farm-, project- or business-scale that would be relevant to a landscape scale analysis. However, the application of the International Finance Corporation (IFC) sustainability performance standards in the Imarisha Naivasha case study demonstrates how landscape-level risks can affect investment decisions. These standards forced investors to take regional water security into account in investment planning, based on the vulnerability of water resources in the Lake Naivasha region. While the IFC does not apply an explicit landscape lens as a formal part of its standards, it does consider social, biodiversity/ecosystems and pollution as considerations in its investments. In other case studies, DFIs have the potential to better leverage institutional investors to support ILM by defining investment entry and exit pathways within an integrated approach. DFIs often have well-tested safeguard policies in place that could increasingly provide the means to incorporate landscape-level risks into investment decisions.

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Glossary

Term	Definition
Agroforestry	Agroforestry is the integration of trees into agriculturally productive landscapes to provide benefits ranging from land regeneration, to soil health and food security. Tropical agroforestry projects typically combine forestry activities (timber, industrial tree crops or fruit trees) with cattle, staple food crops or export crops. This allows projects to achieve profitability earlier and to generate diversified revenues over the long term.
Asset Investment	An investment that aims to create tangible value, thus creating private assets.
Biodiversity Banking (mainly Australia)	Biodiversity banking, also known as biodiversity trading or conservation banking, is a process by which biodiversity loss can be reduced by creating a framework which allows biodiversity to be reliably measured, and market based solutions applied to improving biodiversity. Biodiversity banking provides a means to place a monetary value on ecosystem services.
Biodiversity offset payments	Primarily used by natural resource extraction companies, biodiversity offset payments are direct payments to offset any damage from the environmental impact of their activities. Payments can vary widely in amount and may be voluntary or required by law. Biodiversity offsets are measurable conservation outcomes resulting from the compensation of residual adverse biodiversity impacts persisting after appropriate prevention and mitigation measures have been implemented. The aim of these two methods is to achieve no net loss of biodiversity.
Bond	A debt security, under which the issuer owes the holders a debt and, depending on the terms of the bond, is obliged to pay them interest (the coupon) and/or to repay the principal at a later date, termed the maturity date. Interest is usually payable at fixed intervals (semi-annual, annual, sometimes monthly). Very often the bond is negotiable, i.e. the ownership of the instrument can be transferred in the secondary market.
Carbon credit	A certificate or instrument that represents reduced emissions of greenhouse gases equivalent to one ton of carbon dioxide relative to an agreed baseline.
Collateral	The assets used as security for a loan. If the loan cannot be repaid, these assets are claimed by the holder of the loan (e.g. a bank).
Corporate Social Responsibility	A form of voluntary action that companies take to move beyond philanthropy and compliance to address economic, social and environmental impacts. Furthermore, these steps may be taken in order to minimize local conflicts and/or operation risks in their business through taxation or regulations.
Debt-for-nature swaps	Debt-for-nature swaps are financial transactions in which a portion of a developing nation's foreign debt is forgiven in exchange for local investments in environmental conservation measures. Since the first swap occurred between Conservation International and Bolivia in 1987, many national governments and conservation organizations have engaged in debt-for-nature swaps. Most swaps occur in tropical countries, which contain many diverse species of flora and fauna. Since 1987, debt-for-nature agreements have generated over USD 1 billion for conservation in developing countries.
Due diligence	The process through which an investor (or funder) researches an organization's financial health and organizational capacity, in order to guide an investment (or grant-making) decision.
Emerging market	An emerging market is a country that has some characteristics of a developed market but is not a developed market and can include countries that may have been developed markets in the past.
Enabling Investment	Investments made to create public goods, and thus the conditions for productive investments in assets.
Equator Principles	A voluntary set of banking standards for determining, assessing and managing social and environmental risk in project financing.
Equity investment	An investment whereby an investor owns a portion of the enterprise, usually through owning shares. Eligible to receive dividends, but equity holders have the lowest priority in the event of liquidation of the assets.

Glossary

Term	Definition
Fairtrade	A certification system designed to allow buyers to identify products that meet agreed environmental, labor and social welfare standards.
Financial Instrument	Any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. Can be either cash instruments or derivative instruments: Cash: Bonds, Loans, Equity Stocks, Spot foreign exchange. Derivatives: Bond futures, Options, Interest rate futures, Stock options, equity futures, currency futures; interest rate option and swaps, currency swaps.
Financial Mechanism	Method or source through which funding is made available, such as bank loans, bond or share issue, reserves or savings, sales revenue.
Forest funds	Forest funds are assets held for the specific purpose of investing in forestry activities. Most forest funds finance forest conservation and protected areas, but a few focus on development of the forestry sector. Most of the money held in these funds comes from debt-for-nature swaps and international donors, but some are also funded from private contributions. In addition to providing finance, some funds play an important role in capacity building and facilitation. Most funds support forestry activities with grants and loans, but a few pay for environmental services.
Frontier Economy	Frontier markets are low to middle income countries with less advanced capital markets and less investable stock markets compared to those in emerging markets and other developing economies.
Impact investments	Investments intended to create positive impact beyond financial return.
Institutional investor	An investor, such as a pension fund, insurance company or bank, which generally has substantial assets and experience in investments, and pools and invests capital on behalf of corporations or private individuals.
Institutional Investors	The term 'institutional investors' includes mainly pension funds and insurance companies, but also endowments, foundations and sovereign wealth funds. Collectively, they represent over USD 71 trillion in assets under management.
Integrated Landscape Management	Long-term collaboration among different groups of land managers and stakeholders to achieve the multiple objectives required from the landscape, including agricultural production, provision of ecosystem services, protection of biodiversity, and local livelihoods, health and well-being. Stakeholders seek to solve shared problems or capitalize on new opportunities through technical, ecological, market, social or policy means that reduce trade-offs and strengthen synergies among different landscape objectives.
Integrated Landscape Initiative	A project, program, platform, local initiative, or set of activities that: 1) explicitly seeks to improve food production, biodiversity or ecosystem conservation, and rural livelihoods; 2) works at a landscape scale and includes deliberate planning, policy, management, or support activities at this scale; 3) involves inter-sectoral coordination or alignment of activities, policies, or investments at the level of ministries, local government entities, farmer and community organizations, NGOs, donors, and/or the private sector; and 4) is highly participatory, supporting adaptive, collaborative management within a social learning framework.
Landscape	A mosaic of natural and/or human-modified ecosystems, with a characteristic configuration of topography, vegetation, land use, and settlements that is influenced by the ecological, historical, economic and cultural processes and activities of the area. Both the mix of land cover and use types that make up the larger mosaic, including agricultural lands, native vegetation, and urban areas (landscape composition); and the spatial arrangement of different land uses and cover types (landscape structure) contribute to the character of a landscape. Depending on the management objectives of the stakeholders, landscape boundaries may be discrete or fuzzy, and may correspond to watershed boundaries, distinct land features, and/or jurisdictional boundaries, or cross-cut such demarcations. Because of the broad range of factors a landscape may encompass areas of 100s to 10,000s square kilometers.

Glossary

Term	Definition
Liquidity	The ease with which an asset can be sold at a price close to its true value.
Mitigation Banking (mainly US)	Mitigation banking is the restoration, creation, enhancement, or preservation of a wetland, stream, or habitat conservation area which offsets expected adverse impacts to similar nearby ecosystems. The goal is to replace the exact function and value of the specific wetland habitats that would be adversely affected by a proposed project.
Multilateral Development Banks and Donors	A multilateral development bank (MDB) is an institution, created by a group of countries that provides financing and professional advising for the purpose of development. MDBs have large memberships including both developed donor countries and developing borrower countries. MDBs finance projects in the form of long-term loans at market rates, very-long-term loans (also known as credits) below market rates, and through grants.
Patient capital	A debt or equity investment usually made with accompanying management support services that is made with expectation of payback or exit in the long-term.
Private equity	Finance invested by private equity funds in companies that are not publicly traded on a stock exchange, or invested in publicly traded companies in order to make them private companies.
REDD+	Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, including the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.
Regional Development Banks	The primary goal of regional development banks is to foster growth and cooperation among countries within their particular region (e.g. Asia Pacific, Africa, Latin America, Europe, etc.). They often raise capital through the international bond markets, and tend to work in harmony with MLDBs (e.g. IMF, World Bank, IFC).
Regulated carbon markets	Banks provide equity, loans and/or upfront or upon delivery payments to acquire carbon credits from CDM and JI projects. Most acquire carbon credits in order to serve their corporate clients' compliance needs, supply a tradable product to the banks' trading desks, or develop lending products backed by emission allowances and carbon credits. Allowance trading products can include, but are not limited to: discreet placement of physical orders; fixed-or-floating swaps and indexed sales or purchases; options; allowances repurchase structures; market-making for spot and forward trades; and price hedging based on cross-commodities. Land use sequestration projects in developing countries have largely been omitted because of the relative difficulty in meeting CDM standards and the ban by the European Union Emissions Trading Scheme (ETS).
Rights-holders	People who claim some lands rights, which could refer to ownership and other legally enforceable rights of an individual or a community over land (de jure rights) or occupancy and use rights (de facto rights).
Small and Medium Enterprises	The World Bank defines SMEs as meeting two out of the following three criteria: minimum 50 employees, under USD 3m in either assets or under USD 3m in sales.
Socially Responsible Investing	Investment in organizations or assets that are believed to have a positive benefit to society, whilst screening out socially harmful investments such as tobacco and arms manufacture.
Sovereign Wealth Fund	A state-owned investment fund aiming for long term return, usually using money accumulated from foreign exchange assets, for instance from natural resource royalties.
Supply Chain	System of organizations, people, activities, information, and resources involved in transforming raw materials and components into a product or service, and then moving a product or service from supplier to the end customer.
Value Chain	A value chain is a chain of activities that a firm operating in a specific industry performs in order to deliver a valuable finished product or service for the market; in the case of agriculture, the value chain may include (but is not limited to) input provision, production, processing, transport, storage, marketing, and export.
Voluntary Carbon Markets (VCMs)	In the voluntary carbon markets, the calculation and the certification of the emission reduction are implemented in accordance with a range of industry-created standards (rather than national approval and verification from the UNFCCC).

Additional components of *Financing Strategies for Integrated Landscape Investment*

Title	Author	URL
Integrated Landscape Initiative Analysis	Gabrielle Kissinger	landscapes.ecoagriculture.org/global_review/ilianalysis
Case Study: Namaqualand, South Africa	Gabrielle Kissinger	landscapes.ecoagriculture.org/global_review/ilicasestudies
Case Study: Atlantic Forest, Brazil	Gabrielle Kissinger	landscapes.ecoagriculture.org/global_review/ilicasestudies
Case Study: Imarisha Naivasha, Kenya	Gabrielle Kissinger	landscapes.ecoagriculture.org/global_review/ilicasestudies
Review of Financing Institutions and Mechanisms	Margot Hill Clarvis	landscapes.ecoagriculture.org/global_review/institutionanalysis
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